COUNTRIES MHE SPENDING (2017-2021)

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TOPICS

- Compare the military (M) data to that country's GDP
  - This is a % comparison

- Comparing the educational (E) to that country's GDP
  - This is a % comparison

- Comparing the healthcare (H) data to that country's GDP
  - This is a % comparison

- Comparing the education, healthcare, and military spending (MHE) of the countries
  - This is a % comparison and absolute

- Comparing the per person healthcare, military, and educational spending to the per person GDP
  - This is a % comparison and absolute

- Singling out the fastest growing countries in healthcare and educational spending in fixed value and in %

DATASETS

World Bank Database

- Over 200+ countries with years stretching over 20+ years
- Used this for data sets such as GDP per capita, Military spending (current USD$), etc.

SIPRI

- Involves multiple types of data such as fixed values and military spending per capita of over 200+ countries

Calculations

- Current education expenditure
  - GDP * Government expenditure on education, total (% of GDP)

- Educational expenditure per capita
  - Educational spending / population

INITIAL DATA CLEANING

- For data cleaning, it involved with numerous data files and trying to clear the NaN values and only getting years (2017-2021). Also, finding the top 10 countries by military spending then examining their educational and healthcare spendings.

```
[18]: #converting all values to numbers and removing non-numeric values
      df[years] = df[years].apply(pd.to_numeric, errors='coerce') #error sign still remains, it is fine; proceed on
```

```
C:\Users\sethl\AppData\Local\Temp\ipykernel_25388\322323181.py:2: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  df[years] = df[years].apply(pd.to_numeric, errors='coerce') #error sign still remains, it is fine; proceed on
```

```
[19]: df = df.dropna()
```

```
[20]: df.head()
```

[20]:

	Country	2017	2018	2019	2020	2021
3	Algeria	10073.36	9583.72	10303.60	9708.28	9112.46
5	Morocco	3461.46	3696.86	3721.32	4830.96	5378.37
6	Tunisia	858.95	844.23	1000.92	1157.37	1250.45
8	Angola	3062.87	1983.61	1470.94	993.59	981.45
9	Benin	116.14	90.21	68.11	71.82	97.42

TOP 10 COUNTRIES

- Based off on the military expenditure of each country from 2017-2021 in current US dollars ($)

```
[21]:  #sorting to find the top 10 countries
       top_10_df = df.sort_values(by=2021, ascending=False).head(10)

[22]:  top_10_df
```

	Country	2017	2018	2019	2020	2021
72	United States of America	646752.93	682491.40	734344.10	778397.20	806230.20
99	China	210443.03	232530.60	240332.56	257973.43	285930.52
94	India	64559.44	66257.80	71468.90	72937.06	76348.54
151	Russia	66913.03	61609.20	65201.34	61712.54	65907.71
174	United Kingdom	52075.01	55832.92	56567.60	58332.37	65136.22
187	Saudi Arabia	70400.00	74612.27	65362.67	64558.40	63194.67
160	France	49195.66	51409.81	50118.93	52747.06	56647.00
161	Germany	42281.11	46497.68	49079.44	53318.71	56513.13
100	Japan	45058.47	48535.91	50778.01	51396.54	50957.47
102	Korea, South	39170.68	43069.97	44102.24	46117.10	50873.79

AVERAGE MHE SPENDING (ABSOLUTE)

Average military expenditure of each country 2017-2021 total (current US$)
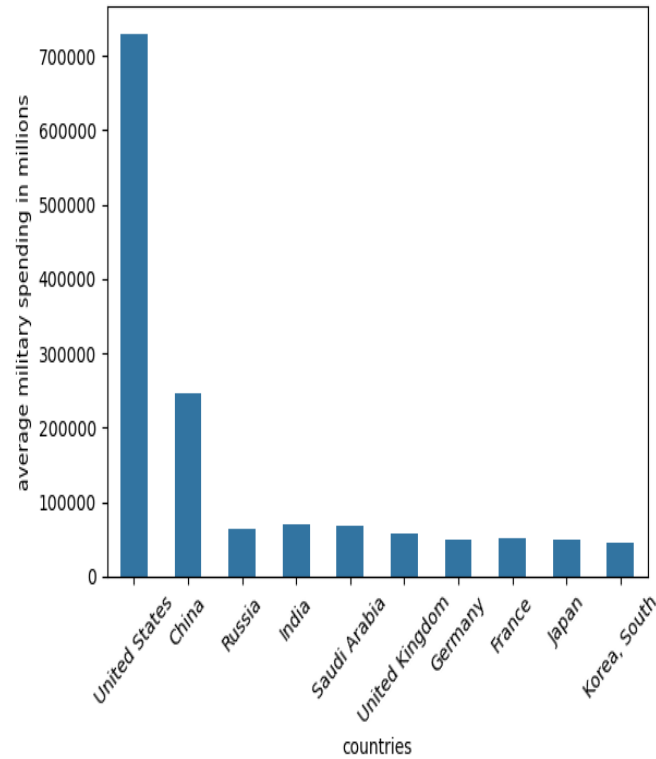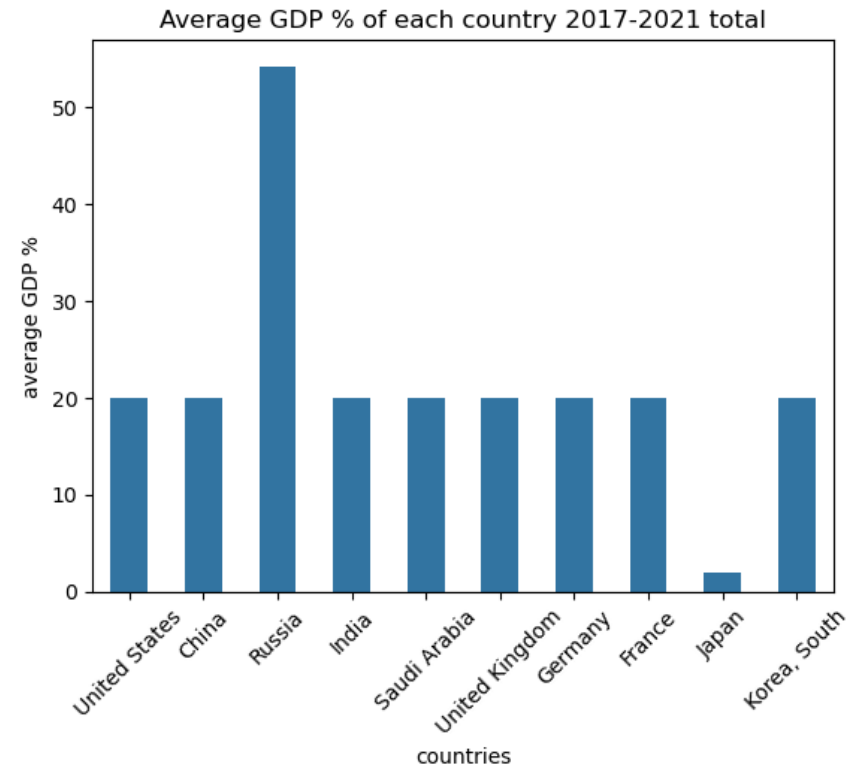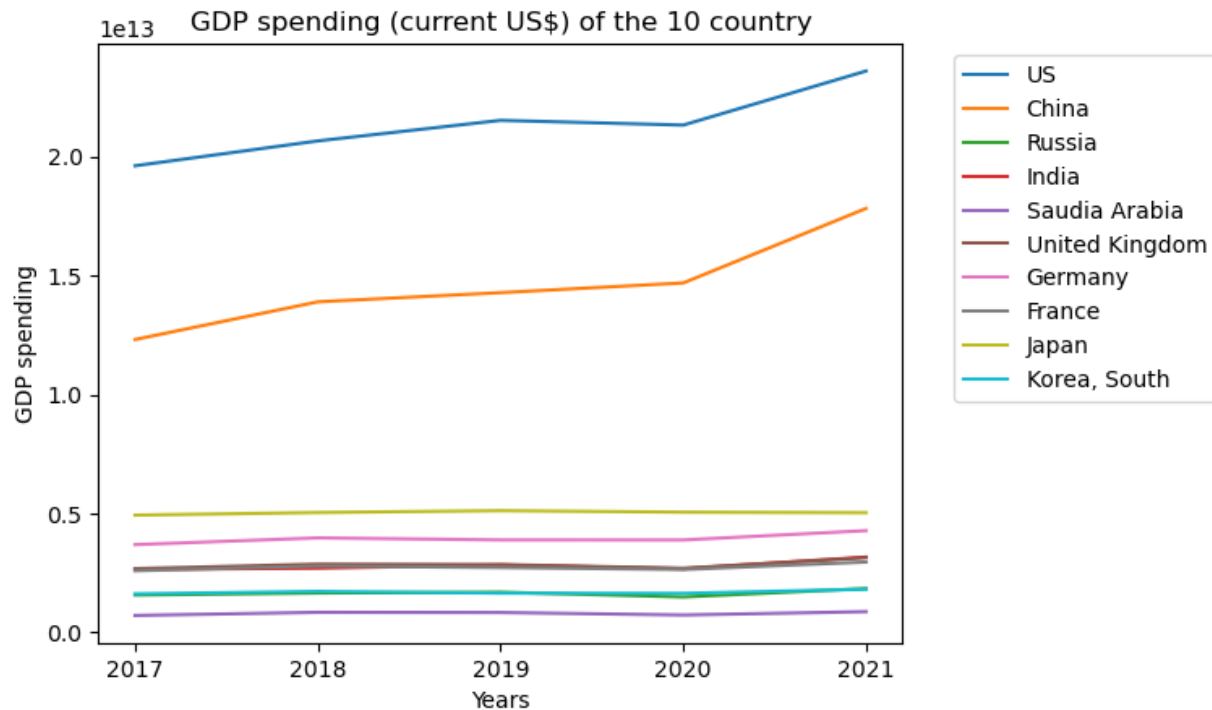
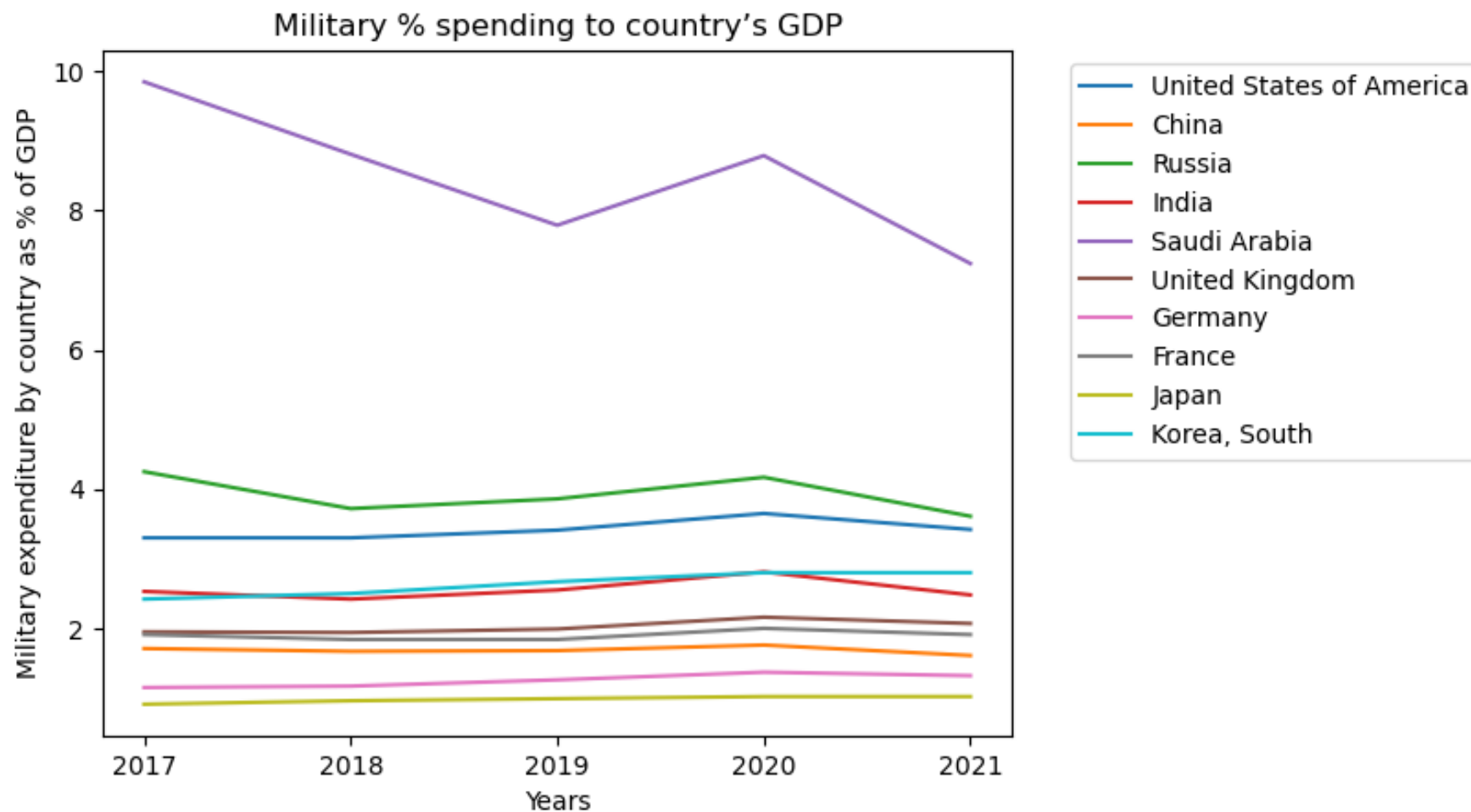Average health expenditure of each country 2017-2021 total
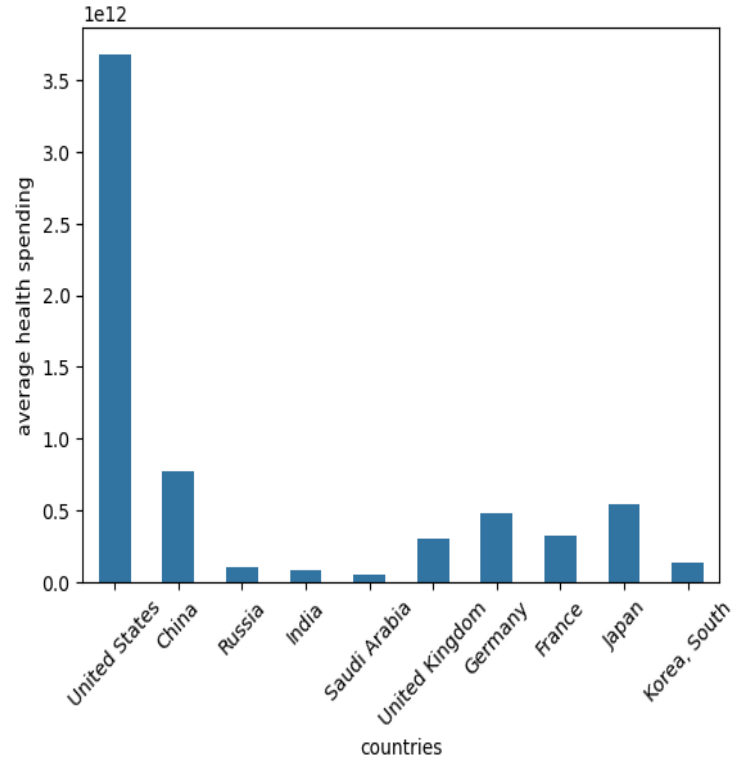
Average educational expenditure of each country 2017-2021 total (current US$)
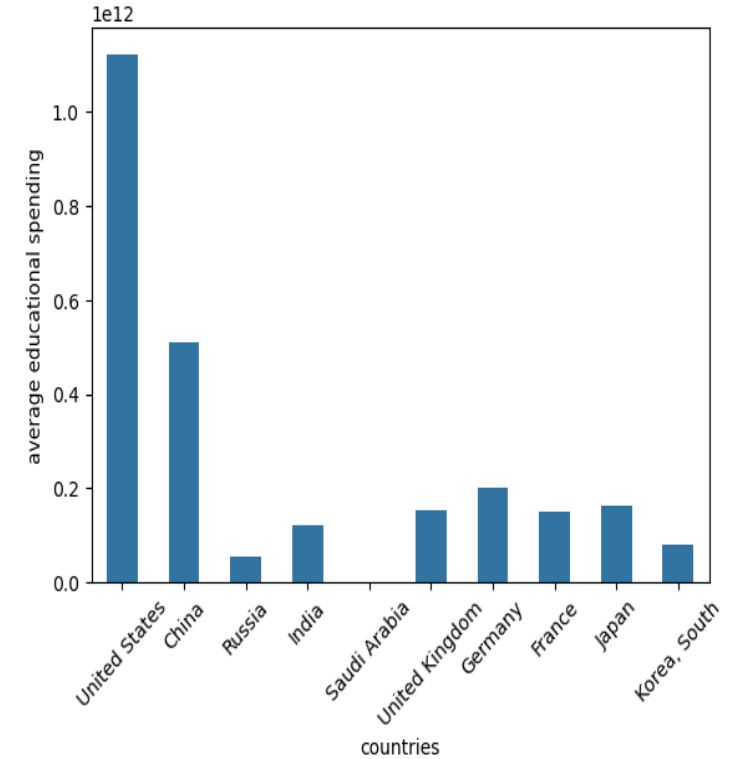
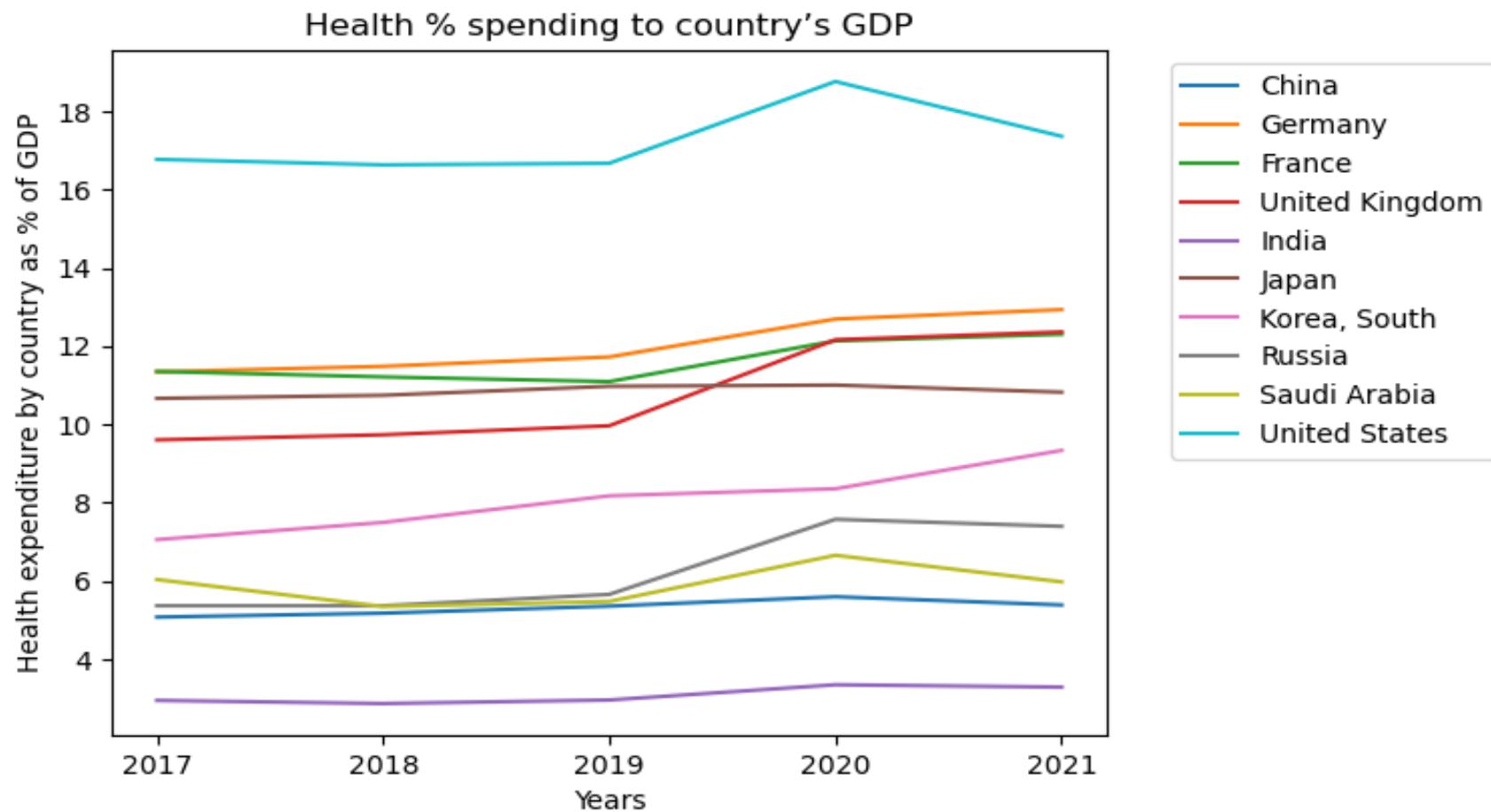# COUNTRIES GDP (ABSOLUTE AND %)

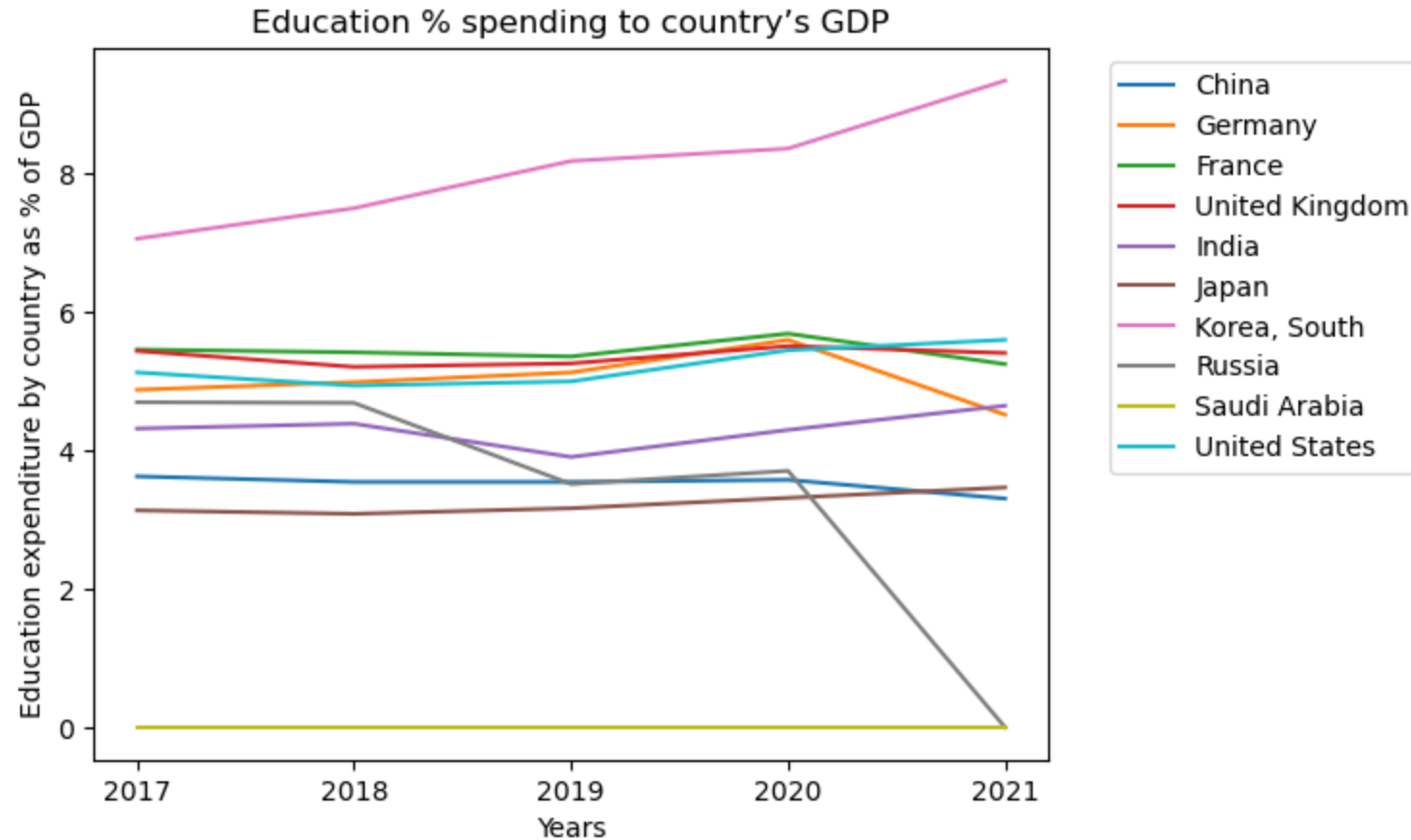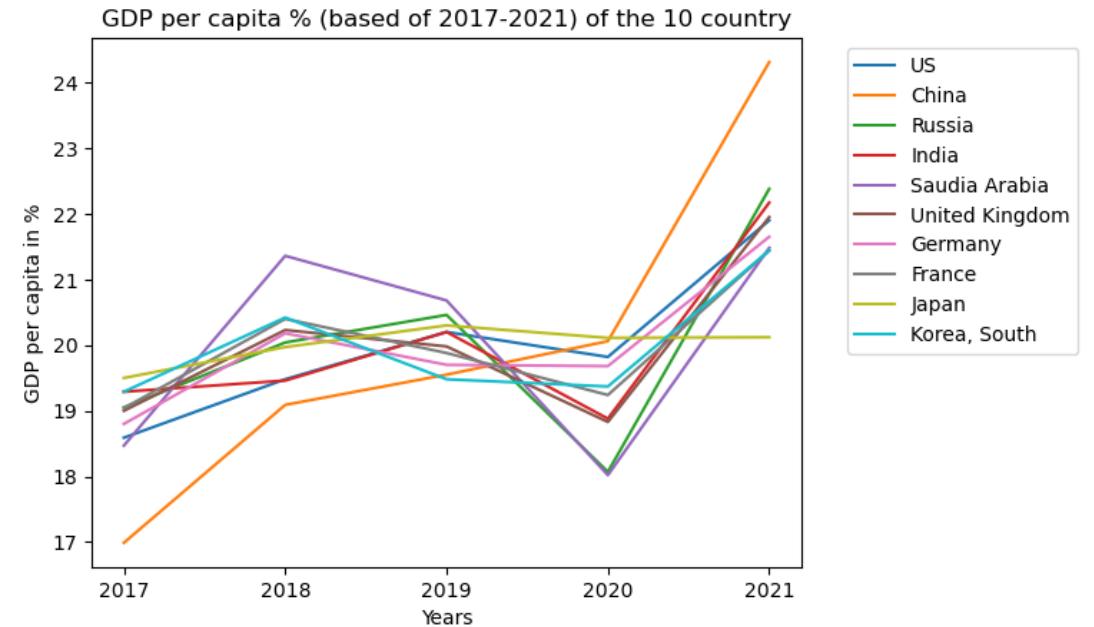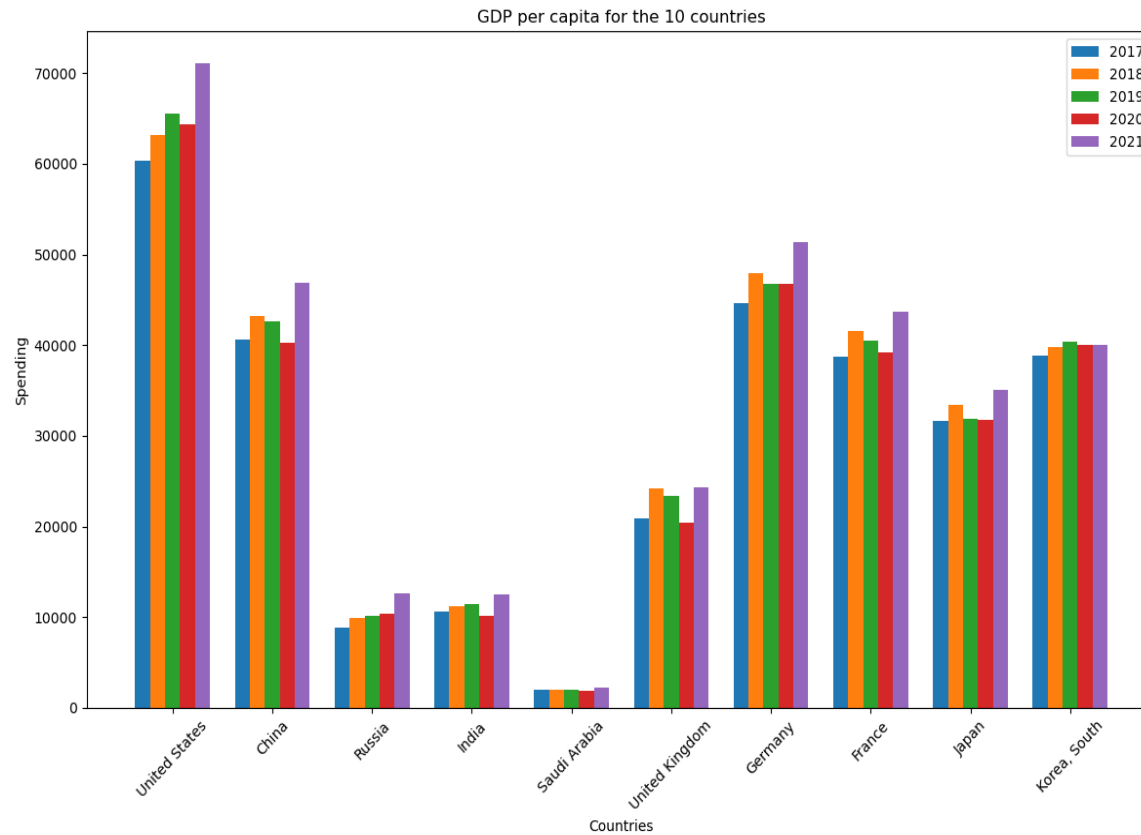# MILITARY % SPENDING TO COUNTRY'S GDP

Military % spending to country's GDP

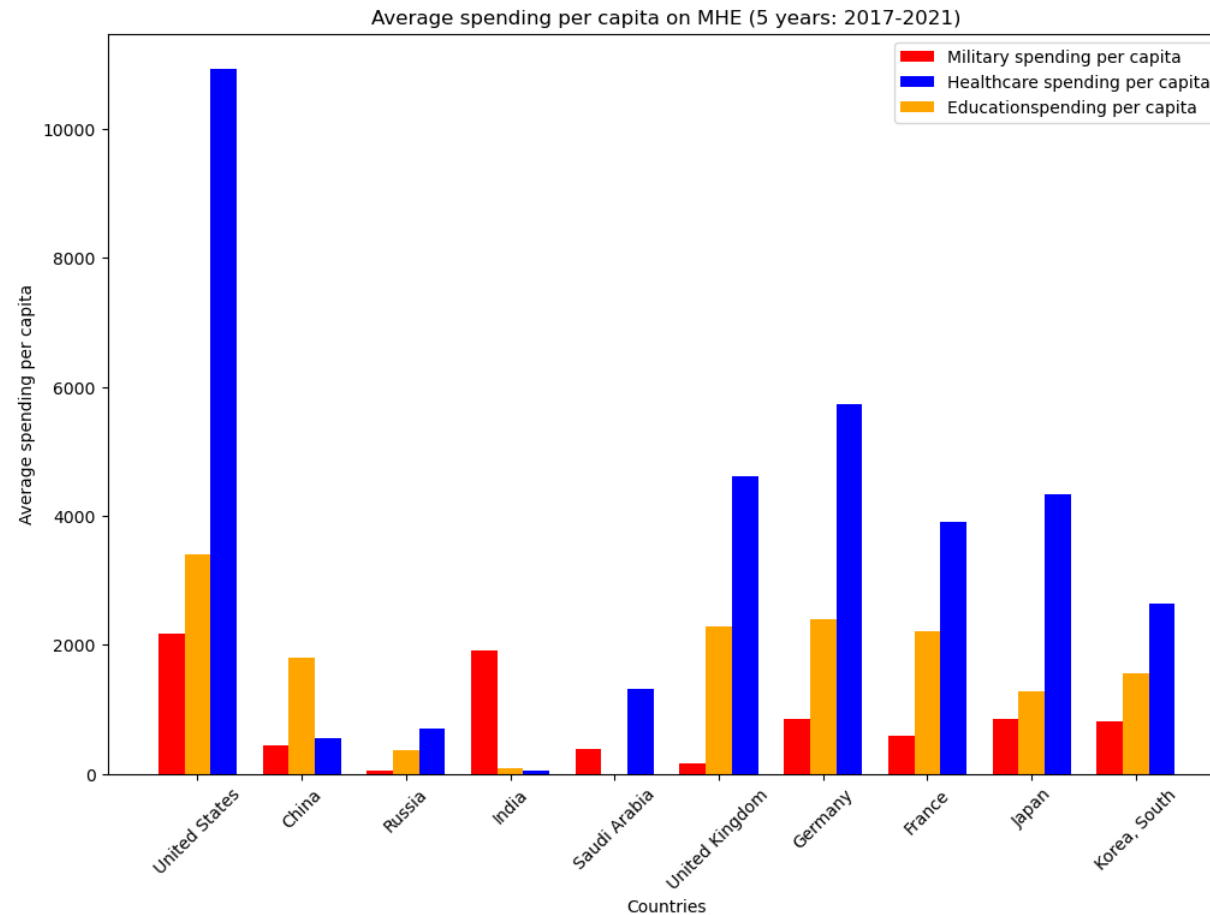# HEALTHCARE % SPENDING TO COUNTRY'S GDP

Health % spending to country's GDP

EDUCATIONAL % SPENDING TO COUNTRY'S GDP

Education % spending to country's GDP

COUNTRIES GDP PER CAPITA (ABSOLUTE & %)

GDP per capita for the 10 countries
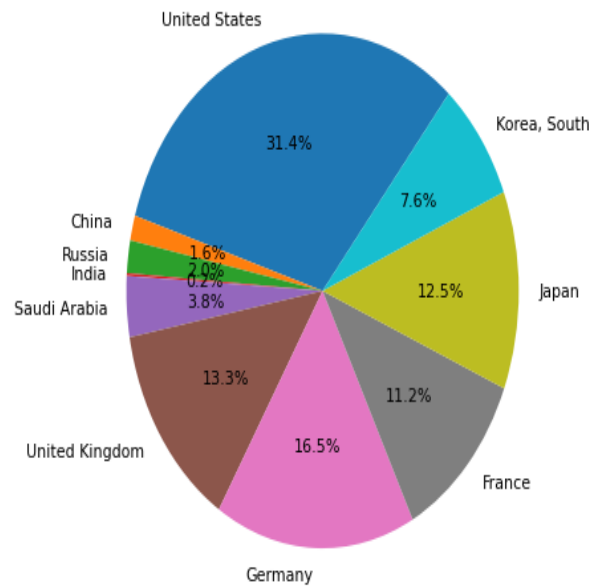
GDP per capita % (based of 2017-2021) of the 10 country

AVERAGE MHE SPENDING PER CAPITA (ABSOLUTE)

Average spending per capita on MHE (5 years: 2017-2021)
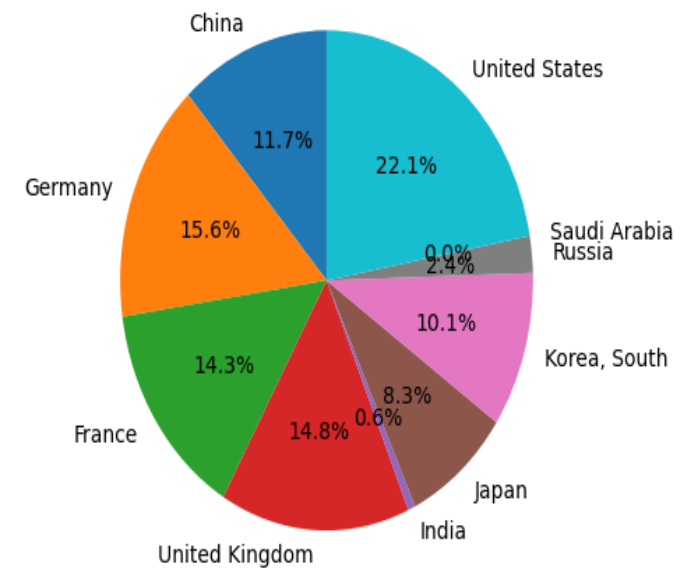
AVERAGE MHE SPENDING PER CAPITA (%)

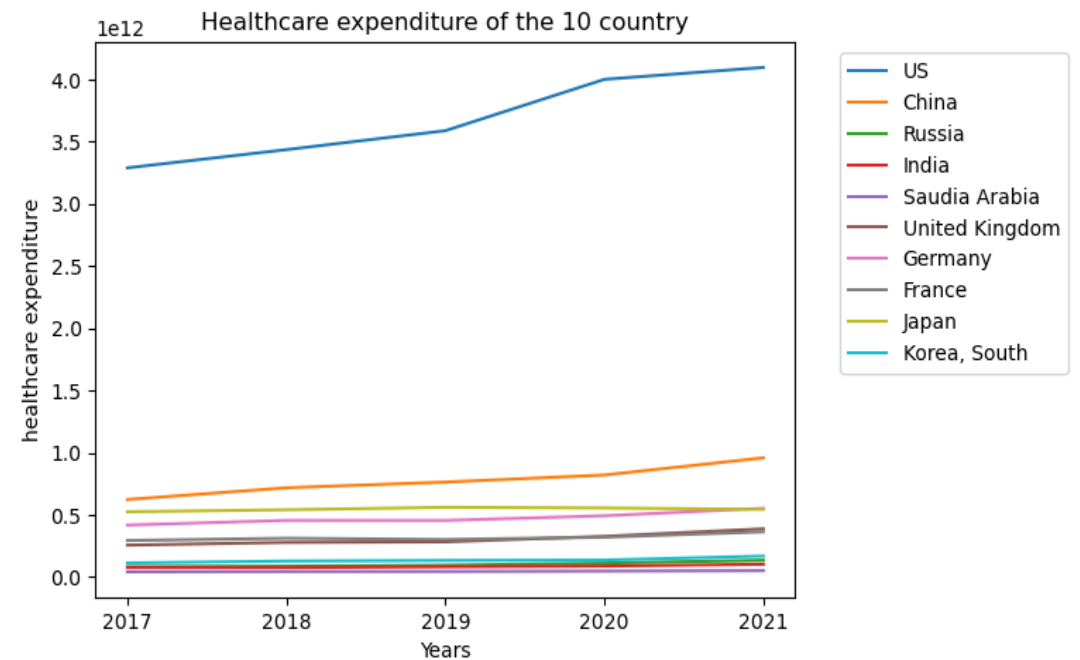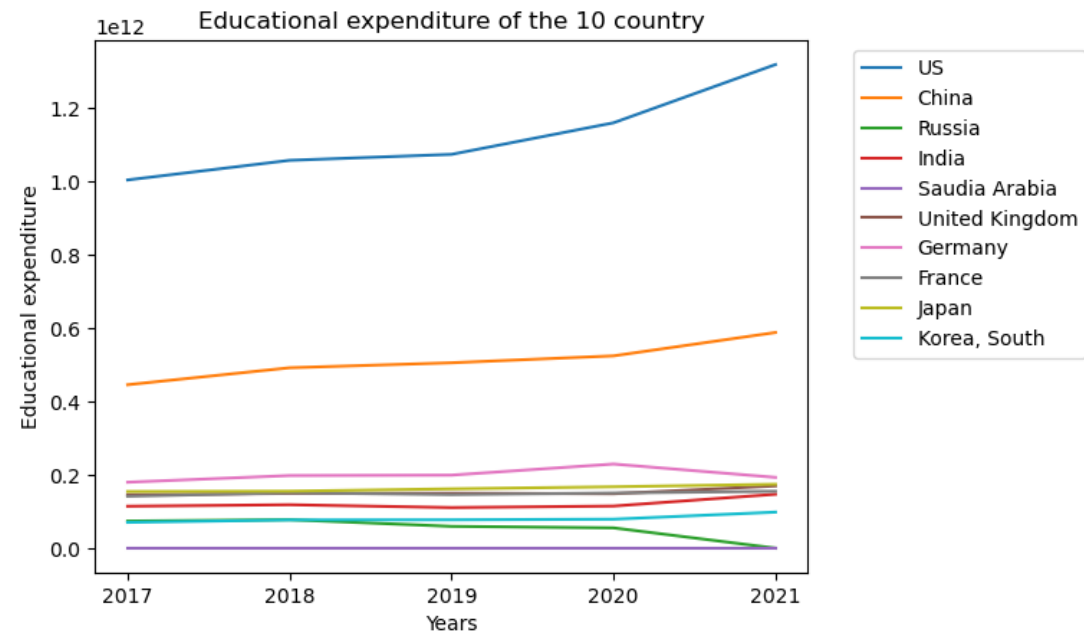Average Military spending per capita Total % of each country
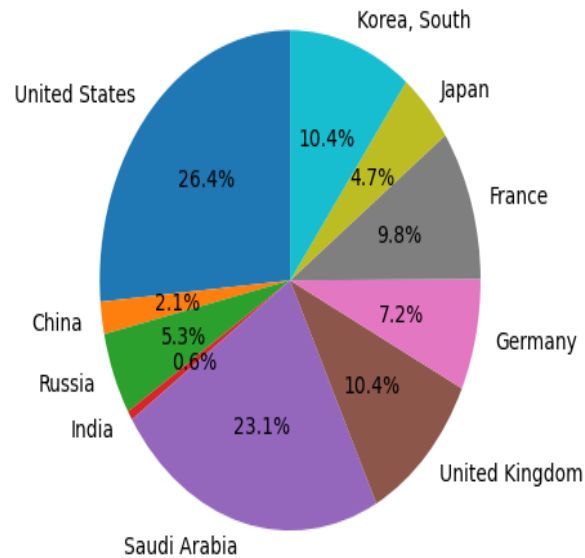
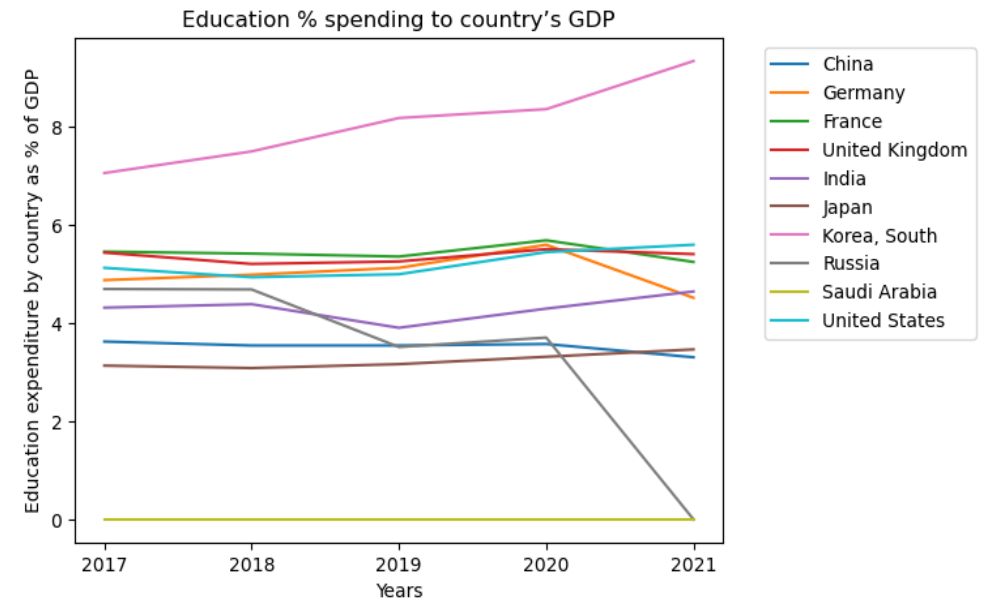
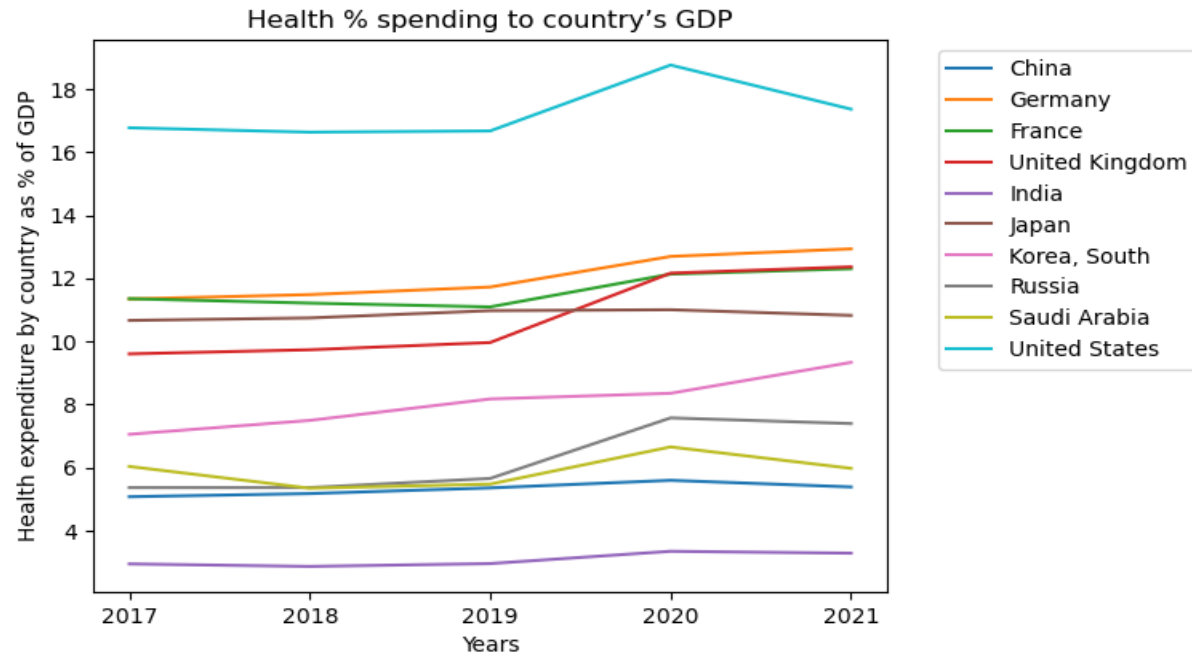Average Health spending per capita Total % of each country

Average Educational spending per capita Total % of each country

TOP HE SPENDERS IN FIXED VALUES

TOP HE SPENDERS IN %

Health % spending to country's GDP

Education % spending to country's GDP

CONCLUSION

- Proves the domination of the United States

- Other countries are prioritizing other things rather than military

- Especially with the timelines, shows that the United States will and always have to maintain their position in military spending with current times
  - (2018-2022 hostilities with China and possibility of BRICS threatening)